

**SUBSTITUTE SPECIFICATION**

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**RECEIVED  
CENTRAL FAX CENTER****NOV 21 2006****A RESISTIVITY LOGGING TOOL AND A METHOD FOR  
BUILDING THE RESISTIVITY LOGGING TOOL****BACKGROUND OF INVENTION**

[0001] Field of the Invention

[0002] The invention relates generally to the field of subsurface exploration and production. More particularly, the invention relates to methods and apparatus for measuring resistivity properties of earth formations penetrated by a wellbore.

[0003] Background Art

[0004] Resistivity logging tools have been used for many years to measure the resistivities of earth formations surrounding a borehole.

Traditionally, resistivity measurements were obtained by lowering a wireline-conveyed logging device into a wellbore after the wellbore was drilled. However, the wireline measurements necessarily involve a delay between the time a well is drilled and when the measure-